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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,848	08/09/2006	Fabian Doeling	P30088	7020
7055      7590      05/21/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER WILSON, GREGORY A				
ART UNIT		PAPER NUMBER		
3749				
NOTIFICATION DATE		DELIVERY MODE		
05/21/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

### Office Action Summary

**Application No.**

10/597,848

**Applicant(s)**

DOELING, FABIAN

**Examiner**

Gregory A. Wilson

**Art Unit**

3749

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 55-114 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 55-61, 68-71, 73-89, 96, 97, 99 and 101-114 is/are rejected.
- 7) ☒ Claim(s) 62-67, 72, 90-95, 98 and 100 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 55-61, 68-71, 73-89, 96, 97, 99 and 101-114** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Link et al (5,076,891) in view of Tonon (5,326,252)**. Link et al discloses a heatable roller (2 & 3) used in the production and/or finishing of a continuous web of material such as paper web (SEE column 3, lines 17-20), including a non-rotatable core (4) and a casing (2 & 3) being rotatable around the non-rotatable core having a duct-filled annular region, Link et al furthermore discloses that the roller is heated from the interior surface, but does not include the teachings of the applicants invention of being coated with a catalyst. Link et al does however disclose (in column 3, lines 63-68) that "instead of providing interior heating via bracer

elements, it is also possible to heat the interior of the roller shell by means of entirely separate heating devices....". Tonon teaches a heating device in the form of a heatable roll (10) (SEE Figures 1 & 3) having a catalyst (11w) (SEE column 5, lines 10-14) which coats the inside surface of the tube heater (10) and is capable of combustion a gaseous fuel/oxidizer mixture applied to the inner wall to produce an exothermic reaction to generate heat to the outer surface (12) and thus acts as a catalytic burner (column 4, line 64 – column 5, line 2). The fuel can be a fuel gas and the oxidizer can be any fluid that will support combustion (column 1, lines 14-15). The outer tube (12) is in contact with the medium to be heated (in combination with Link et al, the said medium would be the paper web). The heat flow of the roller surface (12) is regulated/adjusted by fuel/oxidizer mixture ratio (which is inherently controlled by an undisclosed means) and flow rate. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains to have modified the heatable roller of Link et al by substituting the teaching of applying a catalyst to the inner surface of the roller for the purpose of generating an exothermic reaction with a fuel/oxidizer mixture as taught by Tonon for the heating elements (of Link et al) for the purpose of implementing a more efficient and more versatile heating system as is the benefit of Tonon, opening the door to the possibility of using renewable fuels. With regard to the rejected method claims, Link et al in view of Tonon, teaches a combination structure capable of carrying out the applicants claimed method.

With regards to claims 68 & 96, Tonon teaches a plurality of zones (SEE Figures 1 & 3) successively arranged in a direction of a roller axis, the zones do not all contain the catalytic coating and thus can partly be heatable independently of each other.

In re claims 74 & 102, since the fuel/air mass flow ratio can be set, an overstoichiometric combustion or combustion with a surplus of oxygen can inherently take place.

In re claim 110, Tonon suggests the applicants limitation of a control arrangement to zonally control at least one of fuel mass flow, fuel gas concentration in air, and roller temperature in column 3, lines 19-25.

#### ***Allowable Subject Matter***

**Claims 62-67, 72, 90-95, 98 and 100** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

The Examiner hereby acknowledges the correction to the drawings filed 2/19/09 with the addition of the "black box" representation of rotary inlet (49) added to Figures 1 and 2. These modifications overcome the previous objection to the drawings and thus the objection is hereby withdrawn.

Applicant's arguments filed 2/19/09 with respect to the 35 USC 103 (a) rejections of Link in view of Tonon have been fully considered but they are not persuasive.

Applicant argues that independent claim 55 recites generating heat at least in part inside the roller by catalytically combustion fuel with air or oxygen at least in some regions inside the roller and with regards to claim 83, a heating unit comprising a catalyst arranged on an inside of the roller to combust a fuel with air or oxygen, concluding that no proper combination of Link in view of Tonon renders unpatentable the combination of features recited in the claims. The applicant argues that Link discloses a pair of heated sag compensation rollers arranged to press a continuous material and use hydrostatic bracing elements to bear against the inside surface of the rotating roller shell 5 and that the heating of a hydraulic pressure medium with a heating device 12 is supplied to the hydrostatic bracing elements so that the sag compensation roller can be heated. The Examiner maintains the position that Link is more concerned with having some means for affecting the temperature of the interior of the roller shell and for affecting the temperature of the exterior of the roller shell in such a way that the temperature of the interior of the roller shell differs by no more than a preselected temperature difference from the temperature of the exterior of the roller shell (SEE column 2, lines 43-53). To achieve this, Link discloses structure as argued by the applicant which includes bracing elements, however, in column 3, lines 50-68) Link clearly discloses that **instead of providing interior heating via bracing elements**, it is also possible to heat the interior of the roller shell by means of entirely separate heating means. Tonon provides an alternative means of heating the interior of a roller shell wherein a catalyst (11w) is coated onto the inside surface of a roller (10) which will combust with a gaseous fuel/oxidizer mixture applied to the inner wall of the roller thus

producing an exothermic reaction for the purpose of generating heat that will affect both the interior and exterior of the roller (10). To apply this teaching of Tonon to the roller of Link would have been an obvious alternative means for providing heat to the roller of Link with the added benefit of simplifying the structure of Link, since it would require less components (ie: no need for bracing elements nor the need for a hydraulic medium) thus creating a cost savings. The combination of Link in view of Tonon also renders the applicants argument of the bracing elements scraping off the catalytic coating because the modified structure no longer requires the bracing elements.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. Wilson whose telephone number is (571)272-4882. The examiner can normally be reached on 7 am - 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory A. Wilson/  
Primary Examiner, Art Unit 3749  
May 18, 2009